Surface Water Ambient Monitoring Program (SWAMP)

PROGRAM GOALS AND CHALLENGES

The Surface Water Ambient Monitoring Program (SWAMP), established by Water Code Section 13192, proposes to integrate existing water quality monitoring activities of the State Water Resources Control Board and the Regional Water Quality Control Boards, and to coordinate with other monitoring programs.

PROGRAM GOALS:
- Consistent and objective monitoring methods
- Consistent data quality assurance protocols
- Centralized and integrated data management
- Address all watersheds of the State
- Document water quality in clean areas
- Identify water quality problems
- Evaluate water quality management programs

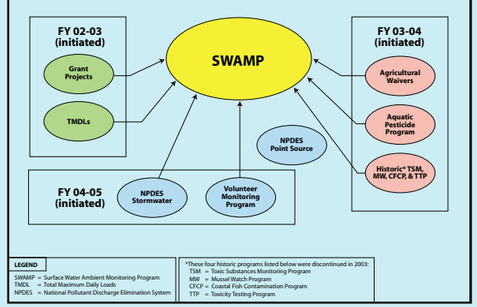
REGULATORY CONSIDERATIONS:
- Adequate State Water Quality Monitoring Program (Clean Water Act §106e)
- List of impaired waters (Clean Water Act §303d)
- State "Report" Card (Clean Water Act §305b)
- Non-point source program (Clean Water Act §319h)
- Basin Plans (Porter-Cologne Act)

GEOGRAPHIC CHALLENGE:
- 190 hydrologic units
- 11,000 miles of rivers and streams
- over 10,000 lakes
- over 1,300,000 acres of bays and estuaries
- 1609 miles of coast line

SWRCB & RWQCB BOARDS COORDINATION

- Capture Monitoring Data
- Ensure Data Comparability
- Coordinate for QA and Data Formats
- Programs Involved:
  - Regional Watershed Assessments
  - TMDLs
  - Grant Projects
  - Aquatic Pesticide Monitoring
  - Waivers
  - Clean Water Team (volunteer groups)
  - Fish/Shellfish Bioaccumulation

MONITORING DATA COORDINATION



MAIN PROGRAM ELEMENTS

- **MONITORING**

  Regional Watershed Assessment Monitoring: Document ambient water quality conditions in potentially clean and polluted areas, using a rotating basin approach.

  Statewide Monitoring: probabilistic monitoring; will provide status and trends; "the state report card". Will cover non-point source and trend monitoring.

  Data collected include:
  - chemical
  - toxicity
  - bacteria indicators
  - fish/shellfish tissue
  - biological assessment
  - habitat assessment
  - field data

- **QUALITY ASSURANCE:**
  - implementation of provisions described in QAPP
  - external expert peer review of program's scientific, technical and programmatic processes

- **DATA MANAGEMENT:**
  - will include database development and training

- **REPORTING:**
  - will include peer-reviewed technical reports, and summaries for the general public

- **PROGRAM INPUT AND EVALUATION:**
  - SWAMP Roundtable (composed of technical representatives from participating agencies)
  - Public Advisory Group (established by Water Code Section 13191)
  - External Scientific Review Committee

SWAMP PARTICIPANTS

- State Water Resource Control Board
- Regional Water Quality Control Boards
- Department of Fish & Game
  - Marine Pollution Studies Laboratory, Granite Canyon
  - Marine Pollution Studies Laboratory, Moss Landing
  - Fish & Wildlife Water Pollution Control Laboratory, Nimbus
  - Aquatic Bioassessment Laboratory, Nimbus

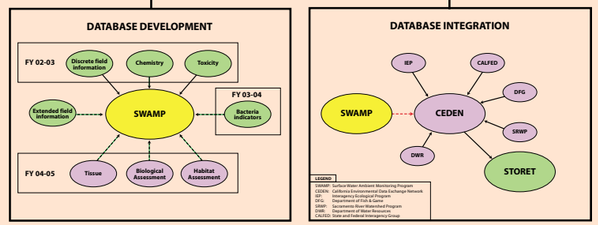
QUALITY ASSURANCE

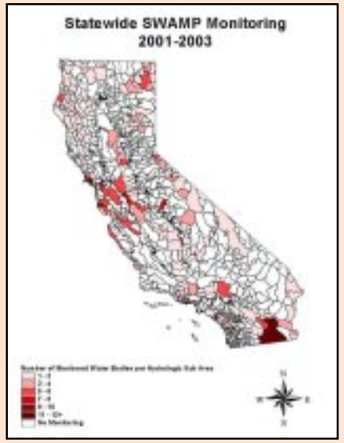
- SWAMP Quality Management Plan (QMP, final (version 1))
- Final (version 1) available at: www.swrcb.ca.gov/swamp/qapp.html
- Performance-Based Measurement System (PBMS) - (•)
- Coordination of Data Quality Objectives and QA/QC now ongoing with other SWRCB monitoring programs
- Inter-laboratory calibration studies to be conducted in Fiscal Year 03-04.

(• PBMS is a U.S. EPA proposed system that allows laboratories to take advantage of newer technology and utilize nonstandard techniques in a much shorter timeframe as opposed to being limited to the traditional prescriptive methods and lengthy method approval process. The technology and technique utilized under the PBMS approach must demonstrate the ability to meet established data quality objectives for the particular application at hand.)

DATABASE MANAGEMENT

- SWAMP Information Management Systems Plan- Interim draft available at http://www.swrcb.ca.gov/swamp/docs/appxj_infomgmtsystemplan.pdf
- Includes: standard transfer protocols; data submissions including path and quality control procedures; technical specifications.
- Design and testing phase completed.
- Individualized training for data form entry from field crews, for required standard formats from laboratories, and for basic data export to the Regional Boards ongoing.
- Data input ongoing.
- Database integration planned with California Environmental Data Exchange Network (CEDEN).





TRAINING WORKSHOPS

- Indicator Bacteria
- Database Management
- Individual Database Use Training
- Quality Assurance
- Analysis & Interpretation of Biological Assessment Data
- Monitoring Design & Data Analysis
- Field Methods Modules

SWAMP WEBSITE: http://www.swrcb.ca.gov/swamp